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MISCELLANEA.

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I.—Mortality at Different Stages of Life.

A VOLUME of great interest and importance has been recently issued by the Registrar-General as a Supplement to his Twenty-fifth Annual Report. It exhibits for each district of England and Wales, the average annual rate of mortality of males and females at various ages, as well as the causes of death, for the ten years ended with 1860. The work is very elaborate; the tabular matter exceeds several hundred closely-printed pages, and is preceded by a comprehensive survey of the facts from the pen of Dr. Farr. From this part of the report the following observations upon mortality at different periods of life has been taken:—

“The Mortality of Infants.

“As there are difficulties in determining the ages of the oldest people in the population, so there are great difficulties in determining the rate of mortality among infants, from the want of exactly observed facts. The infants in the first year of life are to some extent mixed up with infants in the second year of age; and their numbers fluctuate from year to year, owing to fluctuations in the births, and the mortality from zymotic and other diseases, so that the years of infant life cannot be accurately deduced from decennial enumerations of the infants living at the date of the census. Again, the mortality diminishes so rapidly after the date of birth, and at such various rates under different conditions, that it is necessary to subdivide the first year into months, and even days, to get results exactly comparable. The still-born children in England are not registered; and a certain number of infants that breathe for a short time are, it is believed, to save the burial fees, interred as the still-born are buried, and so escape registration. Upon the other hand, the deaths of premature children born alive are registered; and they amounted to 45,814 out of 626,340 deaths of infants under 1 year of age in the six years (1858-63) that they have been distinguished from infants dying of debility (see Table I).* The recognized proportion is 7·315 per cent., so that to obtain the rate of mortality among children *born at*

* The tables alluded to will be found in the original report.

the full term of nine months, the premature children, if we had the means, should be struck out of the account both of the living and dying. This is impossible in the present state of statistical observation. But it happens that these deaths of premature children serve as probably more than a sufficient set-off against the infants of full term dying soon and escaping registration.

"The age of man is reckoned from the date of birth; but before that date the fœtus has lived its intra-uterine life, and the instant in which the sperm-cell and germ-cell intermingle is the true time of the embryo's origin. Respecting the rate of embryonic mortality there is little definite information; but it is probable that as the mortality in the first year of breathing life rapidly increases as we proceed backwards from the twelfth to the third, second, and first month, the same law prevails during embryonic life, until we arrive at the destruction of an immense proportion of the spermatozoa and ova which are provided to secure the continuation of the species. This question well deserves the attention of the Obstetric Society, and is intimately connected with abortions, miscarriages, and still-births.*

"The annexed table (Table II) from the English life table shows the estimated numbers of males and females surviving each month, and the annual rates of mortality in each month. It will be observed that the rate of mortality rapidly declines month by month; and that the mortality of boys in every month exceeds that of girls, so that at the end of the first year the number of boys does not greatly exceed the number of girls.

"The mortality of infants in France was such in the first year as to reduce 1,000,000 to 820,065, according to the experience acquired by following the births in 1856-60 for the twelve months following. The deaths were 179,935, and the probability of dying 0.179935.

"The French returns show the deaths in the first week of life; and by the returns of 1856 the mortality was at the rate of 154 per cent. per annum in the first seven days, 120 in the second seven days, and 54 in the sixteen days following. The mean births were 927,226; the deaths in the three periods were 27,002, 20,517, and 20,618, making 68,137 deaths in the first month of life. So out of 1,000,000 births 29,121 die in the first week, 22,128 in the second week, and 22,236 in the sixteen days following.

"In England and Wales the deaths of 2,374,379 infants in the first year of age were registered in the twenty-six years 1838-63; and of the number 1,329,287 were boys, 1,045,092 were girls.

"996,630 deaths at the same age were registered in the ten years

* "Dr. Granville has the merit of having called attention to the importance of the subject. In his *Report of the Practice of Midwifery at the Westminster General Dispensary*, for 1818, he showed that of 400 pregnant married women who applied at the dispensary 128 had miscarried within the previous ten years one time or more; in all 305 times. The 128 women had given birth during the same term of years to 556 live children, 305 dead embryos. 272 of the women had not miscarried at all; and Dr. Granville does not say to how many living children they had given birth. Of the 305 miscarriages, 185 occurred in the first 3 months of pregnancy, 55 in 3-6 months, and 55 in 6-8 months. (pp. 39--48.)"

1851-60; of boys 557,213, and of girls 439,417. Nearly 100,000 infants died annually; in the proportion of about 56 boys to 44 girls.

"Causes of Death in Infancy: Age 0—1.

"The causes of death are necessarily obscure. The small organs are not fully developed, and the functions are often not easily explored. Of the subjective symptoms no information is supplied by the little patient.

"When the zymotic diseases are fully developed they are distinguishable in infants. The table (pp. 2 and 3) shows the number of deaths from the various species. Whooping-cough was fatal in infancy; but the bowel complaints were nearly three times as fatal as whooping-cough. Thus in the ten years 5,027 boys and 4,114 girls died annually of diarrhœa, dysentery, or cholera. From all zymotic diseases 11,442 boys and 9,956 girls died annually. Of scrofula, phthisis, and hydrocephalus 3,547 boys and 2,723 girls died annually.

"The convulsive diseases and other affections of the brain and spinal chord were fatal to 12,448 boys and 9,171 girls of the first year of age annually. The diseases of the lungs were less fatal. 607 of the boys and 532 of the girls died by accidental or other violence yearly.

"Nothing is known in our statistics about the still-born, as they are not at present registered, on the ground that it is difficult to distinguish them from abortions and miscarriages. But the difficulties are not insuperable; and in many ways the facilities of burying still-born children unregistered throw open the gate of temptation to crime.

"Children under Five Years of Age: 0—5.

"Note.—The rates in the text show the deaths to 100 living, unless another basis is indicated.

"By the English life table, the mortality, it will be seen, decreases rapidly after the first year of life. The annual mortality of males per cent. in each of the first 5 years of age is 18.326, 6.680, 3.624, 2.416, and 1.799; of females 14.749, 6.436, 3.603, 2.450, and 1.785.

"The mortality of males, by the life table, under 5 years of age is 7.014, of females 6.125. During the ten years, 1851-60, the mortality of males of ages (0—5) in somewhat different proportions was 7.243 per cent., of females 6.274 per cent. The proportions of first and second year's children are higher in the increasing population than they are in the life table.

"When the mortality by each cause is treated of, we may take, to avoid fractions, 1,000,000 males living a year for basis; then to that number the annual deaths of zymotic diseases were by small-pox 1,047, typhus, typhoid, and typhoid inclusive, 1,401, measles 2,847, whooping-cough 3,246, scarlatina 4,311, diphtheria 431, cholera, diarrhœa, and dysentery 5,625; making, with others, 22,420 deaths out of 1,000,000 boys by all zymotic diseases, against 21,772 out of

the same number of girls. Whooping-cough was more fatal to girls than it was to boys, in the proportion of 4,003 girls to 3,246 boys; so was typhus or typhoid; all the other zymotics were more fatal to boys than to girls.

"Cancer was fatal to few children; and the deaths were probably from soft cancer (*fungus hæmatodes*). There were many deaths from scrofula and phthisis. Hydrocephalus killed boys in the proportion of 2,915 to 2,162 girls; other diseases of the brain in the proportion of 12,169 boys to 9,479 girls. These brain diseases constitute a sixth part of the mortality of the young boys, and between one-sixth and one-seventh of the mortality of girls.

"Convulsions in infancy is the capital head under which these affections accumulate. Like diarrhoea, convulsion is the result of teething, local irritations, poisons, zymotic action in the early stage, before the development of its characteristic symptoms. The nerve-force is thrown into motion by a great variety of causes; and the convulsion of the muscles is so striking a symptom that it overwhelms all others, some even more dangerous in their essence.

"The heart and lungs—the great seats of the circulatory and respiratory systems—are intimately connected. Death ensues when the heart does not beat. The stoppage of the breath, or anything to prevent the access of oxygen and the expulsion of carbonic acid is fatal. Thus from the affections of the respiratory system we have a mortality of 11,296 boys and 9,499 girls per million. The lung and the brain diseases of girls are equally fatal.

"The diseases of the digestive organs produced a mortality of 1,470 boys and 1,121 girls.

"The maladies of the urinary organs, of the organs of generation, of the joints (excluding scrofula), and skin, are rarely fatal in childhood.

"The violent deaths are nearly as fatal as the idiopathic diseases of the digestive organs, for 1,451 boys 1,138 girls per million living died annually by violence.

"Under other causes are included premature births, atrophy, and debility, malformations, teething, as well as cases in which the causes are unspecified. There are 16,579 annual deaths to a million boys, and 13,885 deaths to a million girls, from a group of causes, including malformations, premature birth, atrophy, debility, and other ill-defined developmental diseases.

"Mortality of Children (0—5) in different districts.

"Death in childhood is an unnatural event, inasmuch as the regular series of development of the human structure from the germ-cell to the perfect man in his prime, and in his last declining stage of existence, is interrupted. But life at all ages depends upon so many conditions, and is exposed to so many risks, that out of given numbers living some die at every age, and we can only take for a practical standard the lowest authenticated rates of mortality.

"Thus, in the sixty-three healthy districts of England, the annual mortality of boys under 5 years of age was at the rate of 4·348, and of girls 3·720 per cent.; the mean being 4·034.

"Twenty-eight districts have been selected, showing the low

annual rate of mortality 3·348 for the mean of the rates of the two sexes: the boys dying at the rate 3·576, the girls at the rate 3·120.

"The twenty-eight districts are found in all the regions of England and Wales, from the northern limits of Northumberland to the New Forest on the Southampton waters.

"The mortality was at the annual rate of 2·317 in Bellingham; 2·593 for boys, 2·040 for girls. This rate is slightly exceeded in the adjoining district of Rothbury, also on the border of Northumberland; and in Bootle, north of the Duddon, on the coast of Cumberland:

"The mortality among the families of the British peerage has been investigated with much care and ability by Mr. A. H. Bailey and Mr. A. Day.* They confined their investigation to the peers, the children of peers, and the children of the eldest sons of peers living in the present century. The numbers existing on 31st December, 1855, were 4,282; 2,283 males, and 1,999 females.

"The mortality of peers' children under 5 years of age was at the rate of 2·069 per cent.; among boys under 5 years of age 2·227, girls 1·882.

"The number of facts for the peerage is small; as the deaths of boys were 274, of girls 196; or 470 in the aggregate. For Bellingham the deaths of boys in ten years were only 112, of girls 82; 194 in the aggregate. The districts of the lowest mortality are very thinly peopled, but there is no reason to suspect that any of the deaths are unregistered. And the mortality only proceeds gradually step by step up to 3·500 in many other districts.

"Dr. Joseph John Fox, in a valuable paper on the vital statistics of the Society of Friends, found that by the returns in the *Annual Monitor*, the mortality under 5 years of age, in 1842-52, was at the rate for boys of 3·190, of girls 2·383.† This mortality differs little from the mortality of the peerage. Another return makes the mortality of the boys of Friends 5·598, of the girls 4·733.

"The mortality of 1,087 children of the clergy has been investigated by the Rev. John Hodgson, M.A., who procured returns in 1829 and 1858 from the parents; the mortality of the boys was at the rate of 3·729, of the girls at the rate of 2·302, in the years under observation; making the mean mortality of the sexes 3·027.‡

"Very different are the rates of mortality among children in 151 districts; where the lowest mortality among boys is at the rate of 7·084, and the highest at the rate of 13·741 per cent. annually. The mean mortality of the districts was, for boys 8·593, for girls 7·432, for both sexes 8·013.

"These mean rates are obtained by adding up the district rates, and dividing by the number of districts.

"The population of children in the 151 districts was 1,391,420 in 1861; and the annual deaths at the rate (3·348) of twenty-eight

* "Assurance Magazine, vol. ix, pp. 305—326.

† "Journal of the Statistical Society, vol. xxii, pp. 219, 220. Dr. Fox says this rate 'is obviously much too low,' and on that ground suspects that the returns are defective.

‡ "Observations on the Duration of Life Among the Clergy, by the Rev. John Hodgson, M.A., Table IV, p. 36.

healthy districts (Table VIII) would be 46,585; while at the mean rate (8·013) it would be 111,494. Thus there is an annual sacrifice of about 64,909 children's lives by various causes in 151 districts of the kingdom.

"The mean annual mortality of children under 5 years of age was 10·022 per cent. in Sheffield, 10·149 in East London (City), 10·203 in Coventry, 10·219 in Nottingham, 10·246 in Whitechapel, 10·277 in Leeds, 10·480 in Wolverhampton, 10·852 in St. Giles (London), 11,725 in Manchester district, and 13,198 in Liverpool district.

"There is no doubt great negligence on the part of the parents, great ignorance of the conditions on which health depends, and great privation among the masses of the poor, but there is no reason to suspect that any great number of the infants of these districts fall victims to deliberate crime; yet the children of the idolatrous tribe who passed them through the fire to Moloch, scarcely incurred more danger than is incurred by the children born in several districts of our large cities.

"A strict investigation of all the circumstances of these children's lives might lead to important discoveries, and may suggest remedies for evils of which it is difficult to exaggerate the magnitude.

"The weaklier lives, it is said, are, under this state of things, cut off; but it must also be borne in mind that many of the strongest children are wounded and are left weakly for life.

"Childhood: Age 5 and under 10 Years: 5—10.

"The child is at this age able to walk and to talk; his forces are greater, and his hold on life is firmer than it was. The rate of mortality declines with every year of age; and during the period of the ten years, 1851-60, it was at the rate per cent. of ·851 for males, ·842 for females. The mean rate of mortality for the twenty-five years, 1838-62, was ·883 and ·876; so that in the years 1851-60 there is a reduction in the rate of mortality per cent. of boys ·032 and of girls ·034.

"Zymotic diseases cause more than half (·451 boys and ·478 girls per cent.) of the mortality at this stage of childhood; and of the zymotic diseases, scarlatina and fever (typhus, typhoid, and typhina, including typhoid and infantile intermittent fever), were much the most fatal. The mortality from scarlatina is less by half than it was in the previous age, but it remains much more fatal than small-pox, measles, whooping-cough, diarrhœa, and other maladies of this class. Diphtheria, which has now taken its place among the fatal diseases of England, in this respect resembles scarlatina.

"Scrofula, tabes, phthisis, hydrocephalus, and diseases of the brain contribute largely to the mortality of this age; so do diseases of the lungs.

"In 163 districts the rate of mortality in both males and females was less than ·700; among boys it was ·388 in the district of Shipston-on-Stour, and ·398 in Bedale, ·435 in Cranbrook, ·492 in Sevenoaks, ·414 in Petworth, ·489 in South Stoneham, ·441 in Andover, ·411 in Ware, ·498 in Royston, ·470 in Henley, ·474 in

Brixworth, '499 in Shaftesbury, '458 in the Scilly Islands, '495 in Ludlow, '483 in Martley, '474 in Pershore, '414 in Billesdon, '476 in Leyburn, '453 in Askrigg, '446 in Reeth, '469 in Bellingham, '434 in Presteigne.

"Among girls the lowest rates of mortality were recorded in the Scilly Islands '299, Billesdon '396, and Reeth '348.

"Very different rates of mortality prevailed in thirty-one districts, where the mortality of males and females exceeded 1'000 per cent.: the mortality of boys was 1'256 in Bristol, 1'277 in Manchester, 1'311 in Merthyr Tydfil, 1'367 in St. James', Westminster, 1'391 in St. Giles (London), and 1'457 in Liverpool. The mortality of females in the same districts was 1'014, 1'220, 1'314, 1'065, 1'083, and 1'433. To boys and girls of this age the Liverpool district was the most fatal.

"Boyhood: Age 10—15 Years.

"This is the age of puberty; and the mortality decreasing from birth is at its lowest rate about the middle of the period; among boys the mortality in the 10 years was at the rate of '488, among girls at the rate of '506 per cent. Among 1,000 boys, less than 5 die every year. As boys actually ill are not sent to public schools, an average of 1 death in 200 boys there would imply an exceptionally high rate of mortality.

"The deaths of boys arise chiefly from injuries under the class of violence '077, from consumption '076, from fever '069, and from scarlatina '046.

"Girls die much less frequently of violence, including burns, than boys; their mortality from this class of causes is only '016. Upon the other hand, they suffer much more than boys from consumption; which at this early age shows its predilection for their sex. How much organization, in-door life, and compression of the chest, interfering with the free action of the breathing organs, have to do with the excess of consumption in girls, it is difficult to say.

"Of the salutary effects of free breathing in the open air there can be no doubt, and if they are studied, it is probable that among them will be found the reduction of the mortality by consumption from '129 to a figure nearer that of boys, '076, which is still much higher than it ought to be.

"Fever, scarlatina, and diphtheria are more fatal to girls than boys.

"The mortality of boys of the age of 10—15 in all England is '488; but there are ninety-five districts in which the mortality is below '350; in the Stockbridge district their mortality was at the rate of '198; in Catherington '144; in Penrith '220; in Easingwold and in Bedale '215.

"In Merthyr Tydfil the mortality of the boys was 1'089; at this age it is the highest rate in England. Sedbergh '936, Abergavenny '877, and Leek '861 stand next on the list. The mortality exceeds '700 in Macclesfield, Congleton, Wigan, Auckland, Easington, Houghton-le-Spring, Chester-le-Street, Neath, Llanelly, Aberayron, and Festiniog.

"Occupation, at this age, plays a part in the mortality; and in the mining districts many of the boys are killed under ground.

"Youth: Age 15—20 and 20—25.

"Growth continues through the whole of these ages; and the body attains its full strength at 25, which is near the average age of first marriage in England.

"Men are now exposed to the full influence of their occupation; but the effect is sometimes only developed later in life, as is the case in respect to Cornish miners.

"The mortality after the age of 15 increases; thus proving that the vital tenacity of men is not proportional to their growth, size, vigour, or intelligence.

"The mortality at the age 15—20 in all England is at the rate of ·669 per cent. for men, and ·738 for women; at the age of 20—25 the mortality is ·883 for men, and ·853 for women.

"The zymotic diseases, which are exceedingly infectious, and occur only once in life, such as measles and whooping-cough, have generally been undergone before the age of 20. Scarlatina and diphtheria also subside as the persons remaining unaffected diminish. Small-pox is, however, more fatal at the age 20—25 than it was at 10—15, implying, perhaps, that vaccination was not so common twenty years as it was fifteen years ago, rather than any diminution in the efficacy of vaccination as age advances. Fever is the most fatal zymotic disease at these ages; that it is more fatal than it is at the age 25—35, is due probably to the exposure of immigrants in the towns to the various forms of typhine, and to their subsequent comparative immunity from its effects. The mortality from fever of men of the two ages was ·086 and ·085; of women ·103 and ·078. Young girls are more exposed than young men to the sources of typhoid fever, which Dr. Murchison has aptly designated pythogenic fever. The mortality by violent deaths was ·086 and ·095 among men of these two ages; and only ·016 and ·013 among women. But one cause of death at these ages is peculiar to women; the mortality from childbirth, including metria, or the fever of that name, is ·014 and ·061. These deaths thrown in do not compensate for the excess of deaths by violence among men; but phthisis is so much more prevalent among young women than it is among young men, that it more than compensates at 15—20 for the excessive deaths by violence among young men. The mortality by phthisis at the two ages was ·240 and ·406 for men, ·352 and ·429 for women. Half the deaths of young women at these ages are by consumption.

"The mortality of males at the age 15—20 is lower than ·400 per cent. from all causes in thirty districts of the country, and exceeds ·800 in eighty-five districts. The mortality of districts is swollen at this age and the age following by deaths in hospitals, to which unmarried men often resort in great numbers. Several Welsh and other rural districts also figure here.

"The mortality of males from all causes at the age 20—25 is below ·500 per cent. in twelve districts; and above 1·200 in forty-two districts.

" Reproductive Age ; 25—35.

" At this age 67 in 100 of the men are husbands and 67 in 100 of the women of England are wives, or 2 in 3 ; and a considerable proportion of them are parents. By early death 2 of 100 men are left widowers and 3 of 100 women are widows.

" The mortality of men at this age is .957 per cent., of women .992 per cent. Fever is the chief zymotic disease ; .067 for men and .063 for women ; but the mortality by diarrhœa, dysentery, and cholera is growing greater ; it is .024 for men and .027 for women. Phthisis is the great preponderating malady ; the mortality by it was .403 for men and .458 for women. By violence the rate was .100 for men, .013 for women ; but at this age childbirth induces a mortality of .089 ; thus making the mortality under these two heads greater than the mortality of men by violence.

" The diseases of the brain, of the heart, and of all the important organs begin to grow more fatal ; but the organs give way much more frequently at later ages.

" In thirty-three districts the mortality of men was at rates below .650 per cent. ; in Kettering the mortality was .508, Thrapstone .597, Evesham .557, Pershore .597, Billesdon .573, Bourn .545, Gainsborough .579, Wetherby .588, Tadcaster .538, Pocklington .562, Reeth .569, Easington .581, Longtown .596.

" The mortality exceeded the rate of 1.500 per cent. in eleven districts ; it was 1.995 in Gravesend, 1.719 in the Scilly Islands, 1.547 in Aberayron, and 1.596 in Liverpool. The high mortality 2.010 in Barnet is due to a lunatic asylum ; in Alverstoke, East Stonehouse, and the Medway, to hospitals.

" Manhood ; Age 35—45.

" A large proportion of the men and women of this age are settled, are married, and have children. Their occupations for life are fixed, and the effects of workshops on health and disease are sometimes perceptible.

" The mortality of men is at the rate of 1.248 per cent. The mortality by fever, .065, is lower than it is at any other age, as the number of susceptible persons has diminished, and the diminution is not yet counteracted by the high rate of mortality from advancing age among those attacked. Cholera, diarrhœa, and dysentery .032 and other zymotic diseases (.052) are fatal to some extent ; but by all zymotic diseases the mortality is .160. Consumption is still the great fatal disease .400 ; as to it a third of the deaths are referable. But the brain, heart, lungs, stomach, and kidneys show signs of wear ; and the mortality from all the classes of monorganic diseases is double that of the previous period. Violent deaths kill at the rate of .115 ; as like accidents grow more fatal.

" The mortality of females 1.215 is not quite at so high a rate as the mortality of males ; either in the class of zymotics, or in the brain, lung, and kidney diseases. The mortality by violence is only .018 among females, against .115 among males ; but this is nearly counterbalanced by the deaths of women from childbirth .090, and ovarian dropsy .021. Cancer, a terrible disease developing with

years, now makes an impression in the catalogue of women's diseases; its mortality is for men '018, for women '059 per cent.

"While the mortality of men in England was at the rate of 1'248 per cent., there were seventy-one districts in which the rate of mortality was below '800. The rate was '507 in Holsworthy, '516 in Market Bosworth, and '539 in Longtown.

"The mortality exceeded 1'800 per cent. in twenty-five districts; nearly all of them in large towns, and nearly all of them containing large hospitals or large lunatic asylums, where many patients die at these ages, and at the three ages following.

"The mortality of men in London, for example, at this age is 1'629 per cent.; and '303 of that mortality, little less than a fifth of the whole, takes place in the great hospitals. The mortality of London women at the same age is only 1'281; and only '127 per cent. of them die in the hospitals.

"Manhood: Age 45—55.

"At this age the intellect is developed and athletic power declines; the reproductive age in women is nearly over.

"The mortality of men was at the rate of 1'796 per cent.; to which zymotic diseases, chiefly fever and cholera, contributed '207; phthisis '383; the chief increase arising under the heads of non-organic diseases of brain, heart, lungs, stomach, and kidneys, covering '912 of the mortality. By violent deaths '137 died.

"Women, except a few, have past the child-bearing age; and the mortality from this cause is inconsiderable. From all causes it is 1'520 per cent.; comprising from consumption '312, that of males being '383; of brain and nerve diseases '199 men and '168 women die; of heart diseases and dropsy '190 men and '206 women; of diseases of lungs '309 men and '206 women. It is probable that the excessive mortality of men at this age—such as miners—is from the bad air and dust which they breathe at work. The diseases of the urinary organs are more fatal to men; those of the generative organs, including ovarian dropsy, to women. Of cancer, the mortality is '042 for men and '128 for women.

"A considerable portion of the higher mortality of men is due to the excess in their deaths by violence; by which the mortality is '137 for men and '027 for women.

"While the mortality of men in England is 1'796, there are twenty-three of its districts in which the rate of mortality is below 1'000; in Ringwood it is '791, Holsworthy '783, Caxton '894, St. Faith's (Norwich) '821, Malmesbury '889, Winchcomb '890, Billesdon '828, Leyburn '886, and Rhayader '890.

"Upon the other hand, in twenty-six districts the annual mortality of men exceed 2'600 per cent. Fifteen of the districts are in London; and the following five contain neither hospital nor lunatic asylum: St. James, Westminster, 2'631, St. Giles 3'031, London City 2'908, Whitechapel, 3'082, and St. George-in-the-East 2'829.

"The lunatic asylums at this age disturb the rate of mortality; thus the Colney Hatch County Asylum raises the mortality of men

in Barnet, one of the healthiest districts of Middlesex, to 3·846 per cent.

"The mortality of men in all London is at the rate of 2·468 per cent.; of which about ·365 is in the hospitals.

"Maturity: Age 55—65.

"The mortality of men of this age was at the rate of 3·086 per cent.; to which zymotic diseases, including fever and cholera, contributed ·313; consumption ·333; diseases of the brain ·410, heart ·413, lungs ·662, stomach ·303, kidneys ·094.

"The mortality of women was at the rate of 2·701 per cent. The zymotic diseases, consumption, brain affections, lung affections, stomach and kidney affections, were less fatal than in males. The rate of deaths by violence was ·038 in women, ·161 in men. Upon the other hand, the rate by cancer was ·093 for men, ·185 for women; by diseases of the generative organs ·001 for men, and ·031 for women, including ovarian diseases.

"In forty-nine districts the mortality of men was below 2·000, or less by 1·086 than the average; in Westhampnett 1·702, Kingsclere 1·757, Thingoe 1·460, Loddon 1·752, Depwade 1·653, Scilly Islands 1·505, Wheatenhurst 1·778, Longtown 1·741, Bootle 1·606.

"To men of this age, Alston was the most fatal district in England; their mortality there was at the rate of 6·800 per cent.; then follow Reeth 5·060, the City of London 5·014, St. Giles, London, 5·243, Whitechapel, containing a hospital, 5·483, Manchester 5·266, and Liverpool 5·350.

"Maturity: Age 65—75.

"The mortality of men at this period of life is more than double their mortality in the previous decenniad. In the ten years it was 6·533 per cent.; of which ·579 was by zymotic diseases; ·150 by cancer; ·239 by phthisis; ·983 by diseases of the brain, ·871 by diseases of the heart, 1·342 by lung diseases; ·484 by diseases of the digestive organs; ·245 by diseases of the urinary organs; making the aggregate mortality by local or monorganic diseases 3·964. The mortality by violence of various kinds was at the rate of ·181 per cent.

"The mortality of women at this age was 5·866, or less by ·667 than that of men. Fever was somewhat less fatal to them than to men; so also were phthisis, and all the pulmonary diseases. The mortality of women of kidney, &c., diseases was ·049, of men ·245; by violence, of women ·072, of men ·181. Upon the other hand, cancer killed women at the rate of ·235. Uterine and ovarian diseases at the rate of ·032.

"In thirteen districts of England the mortality of men of the age 65—75 was below 4·000 per cent.; it was 3·548 in the Scilly Islands, Flegg 3·667, Rothbury 3·831, Easthampstead 4·427, Henstead 4·258, Thetford 4·444, Cricklade 4·467, Tetbury 4·369, Sedbergh 4·479, Easingwold 4·253, Brampton 4·142, Bridgend 4·487, Knighton 4·455.

"In Alston the mortality at this age was 11·731 per cent.; in

Reeth 9'524; and it exceeded 9'000 in twenty-one districts, including Alston and Reeth; namely, in thirteen London districts, in Birmingham, Liverpool, Manchester, Leeds, Sheffield, and Newcastle-upon-Tyne.

"Ripeness: Age 75—85.

"The mortality of men at this advanced age is at the rate of 14,667 per cent., of which nearly the half is by causes undistinguished; for the functional symptoms become obscure as age advances. Only 1'004 of the deaths were by recognized zymotic diseases, '173 by cancer, '098 by consumption. The chief mortality was by diseases of the brain 1'709, heart 1'241, lungs 2'109, stomach '525, kidneys '427. By violence '225 died.

"The mortality of women was at the rate of 13'434 per cent.; cancer being more, phthisis less, fatal to women than it was in men; of the total mortality 5'031 was by monorganic diseases; while in men the mortality by these diseases was 6'067 per cent.

"In descending to other districts the mortality was below 12'000 per cent. from all causes in fifty districts, and above 17'000 per cent. in seventy districts, including twenty-four London districts, and the districts of the chief large towns.

"Old Age: Age 85 and upwards.

"I have called this the monumental age; the cup of life is full of years; and the mortality of men is at the rate of 31'008, of women at the rate of 28'956 per cent. The forms of disease are imperfectly developed; the symptoms are obscure; and in three-fourths of the cases the deaths are simply referred to age, and natural decay, or some of the maladies which have not been inserted in the synoptic tables. Cholera did not disdain to destroy a certain number of these lingering lives; some of the men were killed by violence; some of the women were burnt by their clothes taking fire; and many died of recognized monorganic diseases of the brain and chest."

II.—Changes in the House of Lords during the Last Parliament.

THE following statistics are extracted from the *Western Morning News* :—

"Although at the present time the topics which most engage public attention are the political elements of the next House of Commons, a glance at the losses which have been caused by death in the Upper House during the present Parliament will not be without its interest. In the subjoined statement will be found the age of each deceased peer, together with the number of losses in each order of the peerage. The creations, the accessions, a list of extinct titles, and the deaths and ages of Irish and Scotch peers are also appended :—

"Archbishops (4).—Armagh, 89; Canterbury, 82; Dublin, 76; York, 72. United ages, 319; average, 80.

"Lord Chancellor (1).—Lord Campbell, 81.

"Dukes (12).—Athol, 50; Bedford, 73; Buckingham and Chandos, 64;

Cleveland (second peer), 75; Cleveland (third peer), 72; Grafton, 73; Hamilton and Brandon, 52; Newcastle, 53; Norfolk, 45; Northumberland, 72; Richmond, 69; Sutherland, 75. United ages, 773; average 64.

"Marquises (7).—Breadalbane, 66; Bristol, 64; Dalhousie, 48; Huntly, 71; Lansdowne, 82; Normanby, 66; Townshend, 65. United ages, 462; average, 66.

"Earls (43).—Aberdeen (fourth peer), 76; Aberdeen (fifth peer), 48; Beauchamp, 78; Bradford, 66; Cadogan, 81; Camperdown, 74; Canning, 60; Carlisle, 62; Cathcart, 76; Cawdor, 70; Charlemont, 88; Clare, 71; Cottenham, 39; De Grey, 78; Denbigh, 69; Desart, 46; Eglinton and Winton, 49; Elgin, 52; Ellesmere, 39; Fortescue, 77; Gosford, 58; Guildford, 89; Harborough, 62; Harrington, 78; Ilchester, 69; Jersey (fifth peer), 86; Jersey (sixth peer), 51; Lauderdale, 79; Leven and Melville, 75; Longford, 43; Manvers, 82; Minto, 77; Morley, 54; Mornington, 59; Mount Edgecumbe, 64; Pembroke and Montgomery, 71; Poulett, 80; Stair, 88; Strafford, 88; Tankerville, 83; Waldegrave, 71; Westmoreland, 75; Yarborough, 53. United ages, 2,944; average, 68.

"Viscounts (7).—Combermere, 95; Dungannon, 64; Massereene, 51; Maynard, 79; Middleton, 72; St. Vincent, 92; Sidmouth, 69. United ages, 522; average, 74.

"Bishops (6).—Carlisle, 48; Chester, 71; Ely, 83; Peterborough, 84; Rochester, 76; Worcester, 77. United ages, 439; average, 73.

"Barons (32).—Abinger, 67; Arundell of Wardour, 75; Ashburton, 65; Berwick, 59; Braybrooke, 41; Chesham, 70; Clyde, 71; De Freyne, 72; De Saumarez, 74; Downes, 75; Elphinstone, 54; Hastings, 62; Hatherton, 72; Heytesbury, 81; Herbert of Lea, 51; Holland, 57; Lilford, 60; Londesborough, 55; Lyndhurst, 91; Macaulay, 59; Manners, 46; Monson, 66; Ponsonby, 45; Rodney, 43; Rossmore, 68; Sandys, 71; Seaton, 87; Sherborne, 83; Sudely, 62; Wentworth, 26; Willoughby de Broke, 53; Willoughby d'Eresby, 82. United ages, 2,043; average, 64.

"Irish Peers (13).—Baron Ffrench, 74; Viscount Gormanston, 84; Viscount Guillamore, 28; Viscount Harborton, 72; Baron Kinsale, 37; Baron Macdonald, 54; Earl of Mexborough, 77; Baron Muncaster, 30; Baron Oranmore and Browne, 72; Viscount Southwell, 83; Viscount Templetown, 63; Viscount Valentia, 78; Baron Waterpark, 69. United ages, 821; average 63.

"Scotch Peers (7).—Viscount Arbutnot, 82; Earl of Dundonald, 84; Baron Reay, 87; Baroness Ruthven, 80; Baron Sinclair, 95; Baron Somerville, 77; Baron Torphichen, 91. United ages, 596; average, 85.

"Creations (10).—Baron Annaly, Baron Fitzhardinge, Baron Houghton, Baron Llanover, Baron Lyveden, Baron Herbert of Lea, Earl Russell, Baron Seymour, Baron Taunton, Baron Westbury. In addition to these it might be mentioned that the barony of Athlumney, in the peerage of Ireland, was, in 1863, granted to Sir William Somerville, one of the members for the city of Canterbury.

"Accessions (9).—The following peers, who were minors when the present Parliament assembled, have since succeeded to their titles:—His Royal Highness the Prince of Wales, Baron Abercromby, Earl Brownlow, Viscount Downe, the Duke of St. Albans, the Earl of Dunmore, the Marquis of Hastings, Viscount Hereford, and the Marquis of Ormonde.

"Translations (6).—The prelates who have been translated are as follows:—Dr. Longley, from Durham to York in 1860, and from York to Canterbury in 1862; Dr. Baring, from Gloucester and Bristol to Durham in 1861; Dr. Thompson from Gloucester and Bristol to York in 1862; Lord Marcus Gervais Beresford, from Kilmore, Elphin, and Ardagh to Armagh in 1862; Dr. Fitzgerald, from Cork to Killaloe in 1861.

"Extinct Peerages (8).—The following peerages have become extinct since the meeting of Parliament:—The earldom of Clare, the barony of Clyde, the barony of Downes, the viscounty of Dungannon, the earldom of Harborough, the earldom of Canning, the barony of Lyndhurst, the barony of Macaulay.

"It will have been seen that of the archbishops the oldest was that of Armagh, 89; the youngest, York, 72. Of the dukes, the two oldest were the second Duke

of Cleveland and the Duke of Sutherland, each of whom was 75; the youngest was the Duke of Norfolk, Hereditary Earl Marshal of England, 45. The oldest marquis was the Marquis of Lansdowne, 82; the youngest was the Marquis of Dalhousie, 48. The oldest earl was the Earl of Guildford, 89; the two youngest were the Earls of Cottenham and Ellesmere, each of whom was 39. The oldest viscount was Viscount Combermere, 95; the youngest was Viscount Massereene, 51. The oldest bishop was Dr. Davys, of Peterborough, 84; the youngest was Dr. Villiers, of Carlisle, 48. The oldest baron was Lord Lyndhurst, 91; the youngest was Lord Wentworth, 26. The Irish and Scotch peers whose deaths have been mentioned were not lords of Parliament. The oldest Irish peer was Viscount Gormanston, 84; the youngest was Viscount Guillamore, 28. The oldest Scotch peer was Baron Sinclair, 95; the youngest was Baron Somerville, 77.

"The total number of peers who have died during this Parliament amounts to 112, and their united ages reach 7,583 years. This would give a general average of 67 years to each deceased lord. The highest average age was with the archbishops, 80; next would come the viscounts, 74; the bishops show the third highest average, 73; the earls come next with 68; the marquises average 66; and the dukes and barons are the lowest, each with 64. Each of the deceased Scotch peers averaged 85; each of the Irish, 63."

III.—*The Proportion of the Elective Classes in England.*

FROM the same paper to which the *Journal* is indebted for the statistics of the House of Lords, the following details have been obtained:—

"Now that the general election is approaching, it may be well to glance at the distribution of seats amongst the various counties in England, and to give some idea of the proportion which the electors bear to the population in the various constituencies. At the same time the average of each class of voters in the different counties, and the general average throughout the kingdom, may be found to possess some interest.

"The Metropolis (16 members).—In the City of London the proportion of electors to the population is 1 in every 5, Lambeth 12, Finsbury and Southwark 17, Marylebone and Westminster 20, Tower Hamlets 27. Average throughout the Metropolis, 1 in 17.

"Bedford (4).—In the county 1 in 26; in the borough of Bedford 13.

"Berk (9).—In the county 1 in 35; Windsor 15, Reading 16, Abingdon 18, Wallingford 22. Average of borough voters, 1 in 18.

"Bucks (11).—In the county 1 in 29; Great Marlow 19, Wycombe 19, Buckingham 20, Aylesbury 24. Average of borough voters 1 in 20.

"Cambridge (5).—In the county 1 in 24; in the borough of Cambridge 14.

"Cheshire (11).—Southern division 1 in 34, northern division 41; Chester 11, Birkenhead 14, Macclesfield 32, Stockport 37. Average of voters in the county 1 in 37, in the boroughs 23.

"Cornwall (14).—Eastern division 1 in 25, western division 44; Launceston 12, Bodmin 15, Liskeard 15, Falmouth and Penryn 17, Truro 18, St. Ives 19, Helston 24. Average of voters in the county 1 in 34, in the boroughs 17.

"Cumberland (9).—Eastern division 1 in 19, western division 21; Cockermouth 17, Carlisle 21, Whitehaven 31. Average of voters in the county 1 in 20, in the boroughs 23.

"Derby (6).—Southern division 1 in 26, northern division 30; in the borough of Derby 16. Average of county voters, 1 in 28.

"Devon (22).—Northern division 1 in 19, southern division 43; Ashburton 10, Honiton 11, Totnes 11, Exeter 12, Barnstaple 13, Dartmouth 17, Tiverton 19, Plymouth 20, Tavistock 20, Devonport 23. Average of voters in the county 1 in 31, in the boroughs 16.

"Dorset (14).—In the county 1 in 29; Lyme Regis 13, Weymouth 13, Dorchester 14, Bridport 15, Shaftesbury 18, Wareham 18, Poole 19. Average of voters in the boroughs, 1 in 16.

"Durham (10).—Southern division 1 in 25, northern division 67; Durham 12, Sunderland 31, South Shields 32, Gateshead 34. Average of voters in the county 1 in 46, in the boroughs 27.

"Essex (10).—Southern division 1 in 29, northern 35; Maldon 7, Harwich 14, Colchester 18. Average of voters in the county 1 in 32, in the boroughs 13.

"Gloucester (15).—Eastern division 1 in 27, western 29; Gloucester 9, Bristol 11, Tewkesbury 13, Cheltenham 14, Cirencester 14, Stroud 26. Average of voters in the county 1 in 28, in the boroughs 14.

"Hants (16).—Northern division 1 in 43, southern division 45; Southampton 12, Lympington 16, Winchester 16, Petersfield 17, Andover 22, Portsmouth 23, Christchurch 30. Average of voters in the county 1 in 44, in the boroughs 19.

"Hereford (7).—In the county 1 in 16; Leominster 15, Hereford 16.

"Hertford (5).—In the county 1 in 30; in the borough of Hertford 12.

"Huntingdon (4).—In the county 1 in 20; in the borough of Huntingdon 15.

"Isle of Wight (3).—In the county 1 in 24; in the borough of Newport 12.

"Kent (18).—Eastern division 1 in 33, western division 51; Canterbury 11, Rochester 12, Maidstone 13, Sandwich 13, Greenwich 16, Hythe 18, Dover 20, Chatham 22. Average of voters in the county 1 in 42, in the boroughs 16.

"Lancashire (27).—Northern division 1 in 43, southern division 75; Lancaster 12, Manchester 17, Salford 21, Clitheroe 23, Liverpool 23, Rochdale 27, Bury 28, Ashton 29, Preston 29, Bolton 32, Blackburn 36, Warrington 36, Oldham 39, Wigan 42. Average of voters in the county 1 in 59, in the boroughs 28.

"Leicester (6).—Northern division 1 in 17, southern division 25; in the borough of Leicester 14. Average of county voters 1 in 22.

"Lincoln (13).—In the northern and southern divisions the proportion is the same—1 in 20; Great Grimsby 14, Lincoln 14, Stamford 14, Grantham 15, Boston 17. Average of voters in the county 1 in 20, in the boroughs 15.

"Middlesex (2).—In the county 1 in 171.

"Monmouth (3).—In the county 1 in 33, in the district 18.

"Norfolk (12).—Western division 1 in 28, eastern 35; Norwich 13, Lynn 16, Thetford 19, Yarmouth 23. Average of voters in the county 1 in 31, in the boroughs 18.

"Northampton (8).—Southern division 1 in 24, northern 25; Northampton 13, Peterborough 20. Average of voters in the boroughs, 1 in 16.

"Northumberland (10).—Northern division 1 in 21, southern division 45; Berwick 18, Newcastle 19, Tynemouth 31, Morpeth 32. Average of voters in the county 1 in 33, in the boroughs 25.

"Nottingham (10).—Southern division 1 in 23, northern 53; Nottingham 11, Newark 15, East Retford 18. Average of voters in the county 1 in 38, in the boroughs 15.

"Oxford (7).—In the county 1 in 34; Oxford 9, Banbury 17, Woodstock 24. Average of borough voters, 1 in 17.

"Rutland (2).—In the county 1 in 12.

"Shropshire (12).—Northern division 1 in 31, southern division 35; Bridgnorth 11, Shrewsbury 14, Ludlow 15, Wenlock 21. Average of voters in the county 1 in 33, in the boroughs 15.

"Somerset (13).—In the eastern and western divisions the proportion of electors is the same—1 in every 24; Wells 14, Bath 15, Taunton 18, Bridgwater, 19, Frome 23. Average of voters in the county 1 in 24, in the boroughs 18.

"Stafford (17).—Northern division 1 in 37, southern division 55, Stafford 7, Lichfield 9, Newcastle-under-Lyme 13, Tamworth 20, Walsall 27, Wolverhampton 33, Stoke-on-Trent 41. Average of voters in the county 1 in 46, in the boroughs 21.

"Suffolk (9).—Eastern division 1 in 27, western division 32; Bury St. Edmunds 18, Ipswich 18, Eye 21. Average of voters in the county 1 in 29, in the boroughs 19.

"Surrey (7).—Western division 1 in 30, eastern division 79; Reigate 10, Guildford 11. Average of county voters, 1 in 54.

"Sussex (18).—In both the eastern and western divisions the proportion of electors is 1 in 39; Arundel 13, Chichester 13, Lewes 14, Brighton 15, Hastings 16, Shoreham 16, Horsham 17, Midhurst 17, Rye 18. Average of voters in the county 1 in 39, in the boroughs 15.

"Warwick (10).—Southern division 1 in 28, northern division 70; Coventry 7, Warwick 15, Birmingham 26. Average of voters in the county 1 in 49, in the boroughs 16.

"Westmoreland (3).—In the county 1 in 14; in the borough of Kendal 1 in 28.

"Wilts (18).—Northern division 1 in 32, southern division 30; Marlborough 18, Salisbury 18, Devizes 19, Malmesbury 19, Chippenham 20, Cricklade 20, Westbury 20, Calne 28, Wilton 34. Average of electors in the county 1 in 31, in the boroughs 22.

"Worcester (12).—In both the eastern and western divisions the proportion is the same—1 in 25; Worcester 11, Evesham 13, Droitwich 17, Bewdley 19, Kidderminster 31, Dudley 39. Average of voters in the county 1 in 25, in the boroughs 22.

"York (37).—North Riding 1 in 22, West Riding 37, East Riding 41; Beverley 9, York 10, Thirsk 12, Malton 13, Northallerton 14, Scarborough 15, Richmond 16, Whitby 16, Hull 17, Pontefract 17, Ripon 18, Huddersfield 19, Knaresborough 20, Wakefield 22, Halifax 23, Sheffield 23, Bradford 27, Leeds 29. Average of voters in the county 1 in 33, in the boroughs 18.

"It will thus appear that the highest rate of county voters is in Rutland, where the proportion is 1 in 12; and the lowest rate is in Middlesex, where it is 1 in 171. The general average of county voters throughout the kingdom is 1 in 35. The exact average is found in Berks alone, and in twenty-nine counties the rate is above it, namely, in Bedford, Bucks, Cambridge, Cornwall, Cumberland, Derby, Devon, Dorset, Essex, Gloucester, Hereford, Hertford, Huntingdon, Isle of Wight, Leicester, Lincoln, Monmouth, Norfolk, Northampton, Northumberland, Oxford, Rutland, Shropshire, Somerset, Suffolk, Westmoreland, Wilts, Worcester, and York. In the following eleven counties the rate of county voters is below the general average:—Cheshire, Durham, Hants, Kent, Lancashire, Middlesex, Nottingham, Stafford, Surrey, Sussex, Warwick.

"The highest rate of borough electors is found in Surrey, where (excluding the metropolitan constituencies) it is about 1 in 10; the lowest rate is in Lancashire, where the proportion is 1 in 28. The highest in any individual constituency is in the city of London, where it is 1 in 5; the lowest is the borough of Wigan, where it is 1 in 42. The general average of borough voters throughout the kingdom is 1 in 18. This, like the county average, is found in Berks, and also in Monmouth, Norfolk, Somerset, and York. Besides the Metropolis, twenty-two counties are above the average, namely, Bedford, Cambridge, Cornwall, Derby, Devon, Dorset, Essex, Gloucester, Hereford, Hertford, Huntingdon, Isle of Wight, Kent, Leicester, Lincoln, Northampton, Nottingham, Oxford, Shropshire, Surrey, Sussex, Warwick. In the following twelve counties the proportion of borough electors is below the average of the kingdom:—Bucks, Chester, Cumberland, Durham, Hants, Lancashire, Northumberland, Stafford, Suffolk, Westmoreland, Wilts, Worcester.

"It may be remarked that as a rule the highest proportion of borough voters is found in the cathedral cities. The City of London stands at the head of this list, with 1 in 5; Carlisle is the lowest, with 1 in 21. The average rate is 1 in 13, and this is found in Chichester and Norwich. In the following twelve cities the rate is above the average: Bristol, Canterbury, Chester, Durham, Exeter, Gloucester, Lichfield, London, Oxford, Rochester, Worcester, York. Nine are below the average rate for cities, namely, Bath, Carlisle, Hereford, Lincoln, Manchester, Peterborough, Salisbury, Wells, and Winchester.

IV.—Birth-rate and Death-rate in Sydney and Melbourne.

FROM the *Melbourne Argus*:—

"A recent article in the *Sydney Morning Herald* furnishes us with the materials for a very interesting comparison between the rates of birth and death in the suburbs of Sydney and in those of Melbourne. The facts collected by our contemporaries relate to the year 1864, and they show that the eight suburbs of Sydney contained in that year a population numbering 43,625 persons. In our own case, the more leisurely movements of the Registrar-General give us access to no authentic data later than 1863, and we find that in that year the population of the Melbourne suburbs amounted to 114,000 persons. The total number of births in the Sydney suburbs in 1864 was 1,993 and the total number of deaths, 833; and in Melbourne the corresponding numbers in 1863 were 5,590 births and 2,340 deaths. The mean birth-rate over the whole of the Sydney suburbs, therefore, was 45·7 per 1,000, and the mean death-rate 19·1 per 1,000. In the Melbourne suburbs the mean birth-rate was 48·9 per 1,000, and the mean death-rate 21·3 per 1,000—showing that our rate of birth and our rate of mortality are both higher than those of Sydney.

"The detailed birth-rates and death-rates of the several suburbs of Sydney separately are as follow:—

Sydney Suburbs.	Population.	To 1,000 Persons Living.	
		Births.	Deaths.
Balmain	4,668	48·4	14·4
Glebe	4,406	48·8	23·4
Newtown	5,017	37·9	17·3
Redfern and Botany	7,940	61·9	29·5
Paddington	3,020	39·0	17·3
Concord	2,792	46·9	20·8
St. George	6,674	37·3	14·7
„ Leonard's	4,101	37·6	11·4

"Omitting the particulars for the shipping in Hobson's Bay, the following are the rates of birth and death in each of the Melbourne suburbs in 1863:—

Melbourne Suburbs.	Population.	To 1,000 Persons Living.	
		Births.	Deaths.
North Melbourne and Carlton	16,798	79·5	27·3
Fitzroy	11,807	42·8	19·8
East Collingwood	12,653	58·8	21·3
Richmond	11,355	44·6	21·6
Jika Jika parish	8,215	36·5	22·4
South Yarra and Prahran	12,900	35·4	21·0
Emerald Hill and Sandridge	12,393	48·7	20·6
St. Kilda and Brighton	11,236	33·9	12·4
Doutta Galla and Keilor	3,087	48·6	16·2
Boroondara and Heidelberg	5,722	54·7	15·0
Cut-paw-paw parish	6,234	60·9	20·5

"It will be seen by these figures that in both Sydney and Melbourne the highest birth-rate and the highest death-rate were experienced in the same district. In Sydney, Redfern and Botany had a birth-rate amounting to 64·9 to every 1,000 of the living population, and a death-rate of 29·5 per 1,000. In Melbourne, the northern district and Carlton had a birth-rate of 79·5 per 1,000, and a death-rate of 27·3 per 1,000. The highest birth-rate in any of the Melbourne suburbs, therefore, was considerably higher than that of any of the Sydney suburbs, while the highest death-rate was somewhat lower in North Melbourne than in Redfern. If, however, we have the advantage in this respect, Sydney has the advantage in others. For instance, the birth-rate in the Sydney suburbs is more uniform than in those of Melbourne. Though we have four districts in which the rate of birth rises above 50 per 1,000, while Sydney has only one, Sydney has no suburb in which it sinks lower than 37 per 1,000, while we have three. The Sydney suburbs, again, have on the whole a more healthy rate of mortality than the Melbourne suburbs. If 20 per 1,000 be assumed as the mean death-rate of the two cities, it will be found that Sydney has three suburbs in excess of that rate, and five below it; while Melbourne has seven above and four below it. As regards the extremes of the birth-rate and death-rate, the honours are divided. Melbourne attains the highest rate of birth, and Sydney the lowest rate of mortality. The following are the figures :—

	Birth-rate.		Death-rate.	
	Highest.	Lowest.	Highest.	Lowest.
Melbourne	79·5	33·9	27·3	12·4
Sydney	64·9	37·3	29·5	11·4

"Thus the range of the birth-rate is greater in Melbourne than in Sydney, and the range of the death-rate is greater in Sydney than in Melbourne.

"When we compare the foregoing figures with similar data for European countries and capitals, we find that the two Australian cities enjoy an absolute supremacy in the matters of births. The prolificness of our populations is something evidently never dreamt of in the philosophy of the antipodean nations. In England the average birth-rate for the ten years 1853-62 was 34 per 1,000; in London, it was 33·8 per 1,000. The highest average rate in any English county, during the same period, was 41 per 1,000 in Staffordshire and Durham—a ratio not even equal to the average rate of birth in the suburbs of either Sydney or Melbourne, and lower by nearly 40 per 1,000 than the birth-rate of North Melbourne. The lowest birth-rate at home is that of the extra-metropolitan part of Surrey, which was 29·4 per 1,000, or nearly 5 per 1,000 less than the lowest Melbourne suburb, and 8 per 1,000 less than the lowest Sydney suburb. The same with other countries. Scotland has a birth-rate of 34·4 per 1,000, rising in the towns to 38 per 1,000. In France the birth-rate is 26·6 per 1,000; in Austria, 39·4 per 1,000; in Italy, 38·2 per 1,000—none of these rates at all approaching the average birth-rate of either Sydney or Melbourne. The disparity between the rates of mortality here and at home—at all events, so far as England is concerned—is not so marked. The average death-rate in England, for the ten years 1853-62 was 22 per 1,000; and in London, 23·8 per 1,000; in the Melbourne suburbs it was 21·3, and in the Sydney suburbs 19·1 per 1,000. In no English county, however, did the death-rate rise higher than 24·4 per 1,000, while in Sydney, as we know, the highest rate was 29·5 per 1,000, and in Melbourne 27·3 per 1,000. On the other hand, in no English county did the death-rate fall so low as it did in some of the suburbs of the two Australian cities. Rural Surrey, which had the lowest birth-rate had also the lowest death-rate, namely, 17·9 per 1,000, whereas St. Kilda and Brighton had one of 12

per 1,000, and St Leonards (Sydney), one of 11 per 1,000. It would appear, therefore, that the mortality of the Sydney and Melbourne suburbs is more fluctuating than that of the English counties, where the difference between the highest and the lowest death-rate did not exceed 6·5 per 1,000, while the difference between the highest and lowest Sydney suburb was 18·1 per 1,000, and the difference between the highest and lowest Melbourne suburb 14·9 per 1,000. In England, 17 per 1,000 is regarded as a sort of normal rate of mortality, that being the mean death-rate of all the healthiest rural districts. Three of the Melbourne and three of the Sydney suburbs have death-rates considerably lower than this; and, doubtless, if proper sanitary measures were adopted, many of the others might be reduced to equivalent figures. But this is a subject upon which we cannot enter at present."

V.—*Infanticide and Illegitimacy.*

FROM the *Economist*:—

"It seems probable that on the re-assembling of Parliament some effort will be made to deal with the crime of child murder. It is not a new crime, nor is it certain that it has greatly increased; but it has recently become very obvious, and it is the habit of English people to deal with evils only when they are forced on public attention. The case of Charlotte Winsor, the terrible statements of Dr. Lancaster, who asserts persistently that there must be, from the records of his court, 12,000 women in London who have murdered their children, and some calculations, certainly inexact and probably exaggerated, as to the connection between the crime and some causes of death which appear too frequently in the returns, have shocked the public conscience; and though the public mind is still far from decided on any particular course, it is still improbable that the session will pass over without some new effort. Indeed, the statements made by Mr. Justice Willes, on the Western Circuit, as to the imperfection of a law which punishes the concealment of the body of a child but does not punish mere concealment of birth, and which leaves it doubtful whether the killing of a half-born baby is legally a crime at all—if it is one, it is abortion, and not murder—necessitate legislation. It is, therefore, highly expedient that the public should inform itself of the facts of the case, and not be led away by sentimental exaggerations to miss the point at which it intends to aim. That point is, we think, pretty clearly to be seen through the haze of discussion, and may be shortly stated thus: the country intends to put down child murder by any means which will not involve a great relaxation of the social penalties on unchastity. So strong is the public dread of being led by their horror of one crime into increasing the other, that there is a tendency to remain inactive out of sheer fear of action, and we shall probably have speeches opposing all plans from a vague dread of increasing that prevalence of illegitimacy which one paper already asserts is so enormous among us. We shall be told to rely on education, and gradual improvement, and the rest of those vague phrases by which a terribly over-conscious age tries to make itself believe that progress is not a tide which ebbs and flows, but a rushing stream. It is this waste of power in vague talk which we want to avoid, and we, therefore, call the attention of sensible men to the figures compiled some time since by Mr. W. G. Lumley, secretary to the Poor Law Board.

"It is as demonstrable as anything in social statistics can be, that illegitimacy is not a special English characteristic, that it is not on the increase, that it is as fixed a quantity in proportion to population as the number of suicides, that it can be affected by legislation in a certain direction, and that education and civilization, so far from eradicating, tend slightly but visibly to increase it. We will give the

facts which, in our judgment, support each of those assertions. First, England stands fifth in Europe in the scale of morality, the only countries which show a better return being Sardinia, Holland, Spain, Switzerland, and Tuscany, and in all these, except Holland and Switzerland, there are believed to be many more adulterine births, and at least as much general vice as in England. The following is a comparison with the countries most like our own in creed and social character :—

	Proportion of Illegitimates to Children.
England	6·5
Denmark	9·351
Hanover	9·89
Prussia	8·44
Sweden	9·39
Saxony	15·98

“ England, therefore, being among Protestant countries the best. Moreover, illegitimacy does not increase, but, if anything, slightly declines, though the returns we quote present the usual mysterious phenomenon that vice bears an unvarying relation to number :—

Year.	Gross Number of Registered Births.	Proportion per Cent. of Illegitimate Births to Gross Number Registered.
1841	248,554	6·4
'42	517,739	6·7
'43	527,325	6·8
'44	540,763	6·8
1845	543,521	7·0
'46	572,625	6·7
'47	539,965	6·7
'48	563,059	6·5
'49	578,159	6·8
1850	593,422	6·8
'51	615,865	6·8
'52	624,012	6·8
'53	612,391	6·5
'54	634,405	6·4
1855	635,043	6·4
'56	657,453	6·5
'57	663,071	6·5
'58	654,481	6·6
'59	689,881	6·5

“ Again, from the date of the law passed in 1844, under which the guardians were prohibited from prosecuting the father, and the whole burden of the action, both of affiliation and maintenance, was thrown upon the woman, pauper illegitimacy steadily decreased.

Years.	Total Illegitimate Children.	Percentage on Population.
January, 1849.....	17,028	·12
July, „	14,639	·10
January, 1850.....	15,897	·11
July, „	13,419	·09
January, 1851.....	14,419	·09
July, „	12,819	·08
January, 1852.....	13,808	·09
July, „	12,309	·08
January, 1853.....	12,741	·08
July, „	11,119	·07
January, 1854.....	13,461	·08
July, „	12,705	·08
January, 1855.....	14,528	·09
July, „	13,080	·08
January, 1856.....	15,373	·09
July, „	12,325	·07
January, 1857.....	14,397	·08
July, „	11,761	·07
January, 1858.....	14,417	·08
July, „	11,448	·06
January, 1859.....	12,353	·07

“It is, however, by comparing counties that we obtain the most remarkable result. Striking off the metropolis, in which the ratio of education is very high and that of illegitimacy very low—a fact, unfortunately, not due to virtue, but to the prevalence of the great sin of great cities—we find that ‘in Cumberland, Westmoreland, Hereford, the East and North Riding of Yorkshire, the illegitimacy is very high, and so is the standard of education, and the prudence in marrying. But in Monmouthshire, Cornwall, Lancashire, Staffordshire, the education is low, the illegitimacy is also low, but there is a high proportion of early marriages. In Norfolk, however, the state of education as regards the men is far below the average, though as regards the women it is above it. There the number of men who marry under age is rather above the average, but that of the women is below it. This county has long been distinguished for the high rate of illegitimacy.’

“Education, therefore, by developing the fear of poverty, postpones the age of marriage, and consequently increases the temptation to vice, a result which, could we collect statistics from the professional classes alone, would be proved to be an almost unvarying law. No influence in the way of packing or density of population has any appreciable effect, some of the thinnest districts being among the worst, and Scotland, which is much less packed than England, being much lower in the scale of this form of morality. Indeed, so slight is any recognisable influence, yet so permanent are the ratios in some localities, that the Registrar-General is half inclined to attribute the differences to race, and believe that there is more illegitimacy among Danes than Saxons, and so on, a somewhat far-fetched theory.

“Should these figures prove, on inquiry, to be supported by those in the latest returns, they must be taken to point directly to certain conclusions of great value to the legislature. One is, that it is hopeless to think of extinguishing child-murder by extinguishing illegitimacy, that condition being rather more frequent as civilization advances. It is also hopeless to attack it by laws for the prevention of crowding, which has clearly nothing to do with it. No legislative movement in fact has any effect unless it brings home to the man and the woman the heavy penalty which may follow upon indulgence, and it is not proved that an addition to these penalties may not be followed by an addition to the number of murders. It

is, therefore, essential, if we would act efficiently, to act upon the mother *after* the child has been born, either by making coercion steadier and more severe, or by relieving her of the care of her child, or by relaxing the rules which forbid parish-aid for the keep of the child while the mother continues at work.

"Each of these plans has its own very grave drawbacks. It is very difficult to apply steady coercion while juries are so unwilling to convict, and while the public secretly feel its conscience shocked at the impunity conceded to the father while such a heavy penalty is exacted from the mother. It is equally difficult to relieve the mother of her babe without decreasing the restraints on licentiousness—restraints, it must be added, as necessary on women as on men,—and without rousing among the married to whom children are a heavy burden a savage idea that they are punished for being chaste. No poorhouse relieves *them* of their babes. And lastly, a separate allowance for an illegitimate child, if granted out of the 'house,' will in the end make large illegitimate families a source of profit, and restore the worst abuse of the old poor law. The single object, therefore, must be to discover some plan which, while diminishing the burden upon the mother, shall diminish no sexual restraint,—a problem, the solution of which has taxed for years the wisest heads on the Continent, and if taken up seriously here, will probably overtax ours."

VI.—*Shipping Casualties in 1864.*

THE Council have been furnished with a series of Tables upon Shipping Casualties, prepared by Mr. Henry Jeula, of Lloyd's, from data collected by himself. The statistics printed at p. 459, *et seq.*, are arranged in eight geographical sections, namely :—(1) Africa :—West Coast, Cape de Verds, &c. (2) America :—North, British Territory. (3) America :—North, United States. (4) Australia, Tasmania, and New Zealand. (5) Baltic, Norway, White Sea, &c. (6) Belgium, Holland, and West Coast of Denmark. (7) Brazils, River Plate, &c. (8) Cape of Good Hope, St. Helena, Ascension, Algoa Bay, Natal, &c.

It will be seen that the tables not only discriminate the kind of casualty according to *Lloyd's List*, but whether it happened to a sailing vessel or a steamer, whether the injured vessel was bound to or from the section indicated.

The series will be completed by the publication, in the next number of the *Journal*, of the tables relating to the other quarters of the globe, namely, China and the Oriental Archipelago; East Indies, Birmah, &c.; France, Portugal, Azores, &c.; Mediterranean, Black Sea, and Sea of Azof; Pacific and West Coast of South America, and the West Indies, Vera Cruz, Carribean Sea, &c.

Mr. Jeula regards his tables not as a full, but simply as an "approximate record" of a very important subject.